

Work Order ID 93167

93167

Page 1

November-15-12 8:58:16 AM

Item ID: 647.9013

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Fwd Clip

Stop

NS2

Start Date: 11/15/12 Start Qty: 40.00

40

Cust Item ID:

Required Date: 11/30/12 Req'd Qty: 40.00

40

Customer:

Reference:

Approvals:

Process Plan: MUS

Date: 12-11-16

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
110		0.00							
110									
Waterjet	Memo	0.00							
FLOW CNC Waterjet	I-Cut as per Dwg Dwg Rev: N/C Prog Rev: N/C								
2054 - 063	2-Deburr if necessary								
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
120									
QC	Memo	0.00							
Quality Control									

45

BIL - 11-19

45

BIL - 11-19

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions						
				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Other						

Work Order ID 93167

November-15-12 8:58:16 AM

93167

Page 2

Item ID: 647.9013

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: Fwd Clip

Start Date: 11/15/12 **Start Qty:** 40.00

40

Cust Item ID:

Required Date: 11/30/12 **Req'd Qty:** 40.00

40

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

**Sequence ID/
Work Center ID**

**Operation
Description**

**Set Up/
Run Hours**

Tool ID

Tool #

**Plan
Code**

**Accept
Qty**

**Reject
Qty**

**Reject
Number**

**Insp.
Stamp**

130

QC8- Inspect parts - second check

0.00

DAS

15
9-89

12/11/20

45

Con

130

QC

Quality Control

140

Form as per dwg

0.00

45

0
12/11/20

140

Brake NC

Brake NC

150

QC5- Inspect part completeness to step on W/O

0.00

DAS

15
89

12/11/22

45

Con

150

QC

Quality Control

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: Date:

QA Closed: Date:

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS										
			Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other									
Part No. _____																
NCR No. _____																
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector							
Doc/Data																
Equip/Tooling																
Operator																
Material																
Setup																
Other																
Process																
Supplier																
Training																
Unapproved																
FAULT CATEGORY																
Landing Gear				General												
Bending	General			Bend	General			Grain	General			Ovalized	General			Pressure/Forced
Centre Not Concentric to O/S				BOM/Route				Hardware				Over/Under tolerance				Temperature/Cure
Cracks				Broken/Damaged				Inspection Incomplete				Part Incorrect				Weld
Crushed/Crimped.				Burrs				Instructions Incomplete/Unclear				Part Lost/Missing				Wrong Stock Pulled
Cuffs				Contamination				Maintenance				Part Moved				
Heat Treat				Countersink				Mislabeled				Positioned Wrong				
Inspection Strip in Tube				Cut Too Short				Misread				Power Loss/Surge				
Ripples in Bend				Drill Holes				Offset								
Torque Waves in Extrusion				Drawing				Out of Calibration								
Turning Sequence				Finish				Out of Sequence								
Wave/Twist in Tube				Folio				Outside Dimensions								

Work Order ID 93167

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November-15-12 8:58:16 AM

Item ID: 647.9013

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Fwd Clip

Stop

NS2

Start Date: 11/15/12

Start Qty: 40.00

40

Cust Item ID:

Required Date: 11/30/12

Req'd Qty: 40.00

40

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

160

Outsource4

Outsource process - Anodize

Memo

0.00

PL 12-11-26

170

170

Packaging

Packaging

Receive & Inspect for Damage & Mat'l Certs

0.00

P 12/12/18 (38)

180

180

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

38

DAS
05
06

12-12-13

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: Date:

QA Closed: Date:

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other				
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
<input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions							
				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge							
				<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled							
				<input type="checkbox"/> Other							

Work Order ID 93167

93167

Page 4

November-15-12 8:58:16 AM

Item ID: 647.9013

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: Fwd Clip

Start Date: 11/15/12 Start Qty: 40.00

40

Cust Item ID:

Required Date: 11/30/12 Req'd Qty: 40.00

40

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190

190

SprayPaint

Spray Painting

Memo

0.00

38

Ø

Ø

AB

12-12-31

200

200

QC

Quality Control

QC14- Inspect Spray Paint

0.00

38

DAS
05
8-8

13-01-05

210

210

Packaging

Packaging

Identify as per dwg & Stock Location

1390

0.00

Memo

0.00

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

11/18/12

BC

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>			
			Work Order Update <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>				
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other						

Work Order ID 93167

93167

Page 5

November-15-12 8:58:16 AM

Item ID: 647.9013

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: Fwd Clip

Start Date: 11/15/12 Start Qty: 40.00

40

Cust Item ID:

Required Date: 11/30/12 Req'd Qty: 40.00

40

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

220

220

QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

13/1/14 D

Memo

0.00

Pto →

MF
13-1-10

NCR: Yes / No

Pink

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

<p>Work Order: <u>93167</u></p> <p>Part No. <u>647.9013</u></p> <p>NCR No. _____</p>	DISPOSITION <input type="checkbox"/> Rework <input checked="" type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update	AGAINST DEPARTMENT/PROCESS <input type="checkbox"/> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube <input checked="" type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input checked="" type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier	<input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other
--	--	---	--

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									
17/11/14	#150	#170	#7	Qty x 7 parts lost between Small Pab lost inspection Step # 150 to # 170 Review From Anodizin. RL w/o was for 40 pc 45 made but Pto for Anodzin is @ 40 pc. ...	<u>DAS</u> <u>16</u> <u>11/14</u>	inform supplier only Qty x 38 pcs return Not 45 + mark lost 7 pcs as scrap <u>N/A</u>	<u>CJ</u> <u>13/01/14</u>	<u>DAS</u> <u>16</u> <u>13/01/14</u>	<u>Q52042</u> <u>13/11/14</u>

FAULT CATEGORY									
Landing Gear					General				
Bending					Bend				
Centre Not Concentric to O/S					BOM/Route				
Cracks					Broken/Damaged				
Crushed/Crimped					Burrs				
Cuffs					Contamination				
Heat Treat					Countersink				
Inspection Strip in Tube					Cut Too Short				
Ripples in Bend					Drill Holes				
Torque Waves in Extrusion					Drawing				
Turning Sequence					Finish				
Wave/Twist in Tube					Folio				
<u>Small parts</u> <u>excessive handling</u> <u>Over handling</u> <u>Supplier</u> <u>here</u>					Grain				
<u>No. FAULT</u> <u>FOUND</u> <u>Check</u> <u>13/11/15</u>					Hardware				
<u>R.L. LOA when creating the Pb</u> <u>+ mishandling of parts</u>					Inspection Incomplete				
<u>Offset</u> <u>Out of Calibration</u> <u>Out of Sequence</u> <u>Outside Dimensions</u>					Maintenance				
<u>mislabeling</u> <u>misread</u> <u>offset</u> <u>out of calibration</u> <u>out of sequence</u> <u>outside dimensions</u>					Mislabeled				
<u>Power Loss/Surge</u> <u>Other</u>					Misread				
<u>Weld</u> <u>Wrong Stock Pulled</u>					Offset				
<u>Pressure/Forced</u> <u>Temperature/Cure</u>					Out of Calibration				
<u>Weld</u> <u>Wrong Stock Pulled</u>					Out of Sequence				
<u>Other</u>					Outside Dimensions				

Picklist Print

November-15-12 8:58:16 AM

Page 1

Work Order ID: 93167

Parent Item: 647.9013

Parent Item Name: Fwd Clip

Start Date: 11/15/12

Required Date: 11/30/12

Start Qty: 40.00

Required Qty: 40.00

Comments: IPP REV: A 12.11.01 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.063 2024-T3 .063 sheet		Purchased	No			110	sf	244.4200	0.034	1.4315789		1812 - 11 - 19	

Location	Loc Qty	Loc Code
MAT022	244.42	
119916	0.1	
121197	16.32	
123654	36	123654
123701	192	

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____		DISPOSITION			AGAINST DEPARTMENT/PROCESS					
Part No. _____		Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Use-as-is <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>		
NCR No. _____		Work Order Update <input type="checkbox"/>	Machining <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
			Large Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Composite <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Supplier <input type="checkbox"/>		
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions						
				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Other						

DART AEROSPACE LTD	Work Order:	93167
Description: Fwd Clip	Part Number:	647-9013
Inspection Dwg: 647-9013 Rev: N/C		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

34

Measured by: <u>RB</u>	Audited by: <u>15 9-89</u>	Preliminary Approval:
Date: <u>12-11-19</u>	Date: <u>12-11-20</u>	Date:

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15.

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03266			SHEET 1 OF 2	
	DWG NO. 647.9000	REV: N/C	PREPARED BY A. QUAN	DATE: 11/15/11	EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC.
DWG TITLE: SHEETMETAL					
APPROVED BY:	ENGR: <i>P. Brown</i>	MFG: <i>Dawn Baker</i>	QC: <i>Mark Lynn</i>	EFF:	CURRENT ORDER AND STOCK
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE		REASON: REVISED 647.9014 MATERIAL, REVISED DIMENSIONS OF P/N 647.9012			

SHEET 1, NOTES:

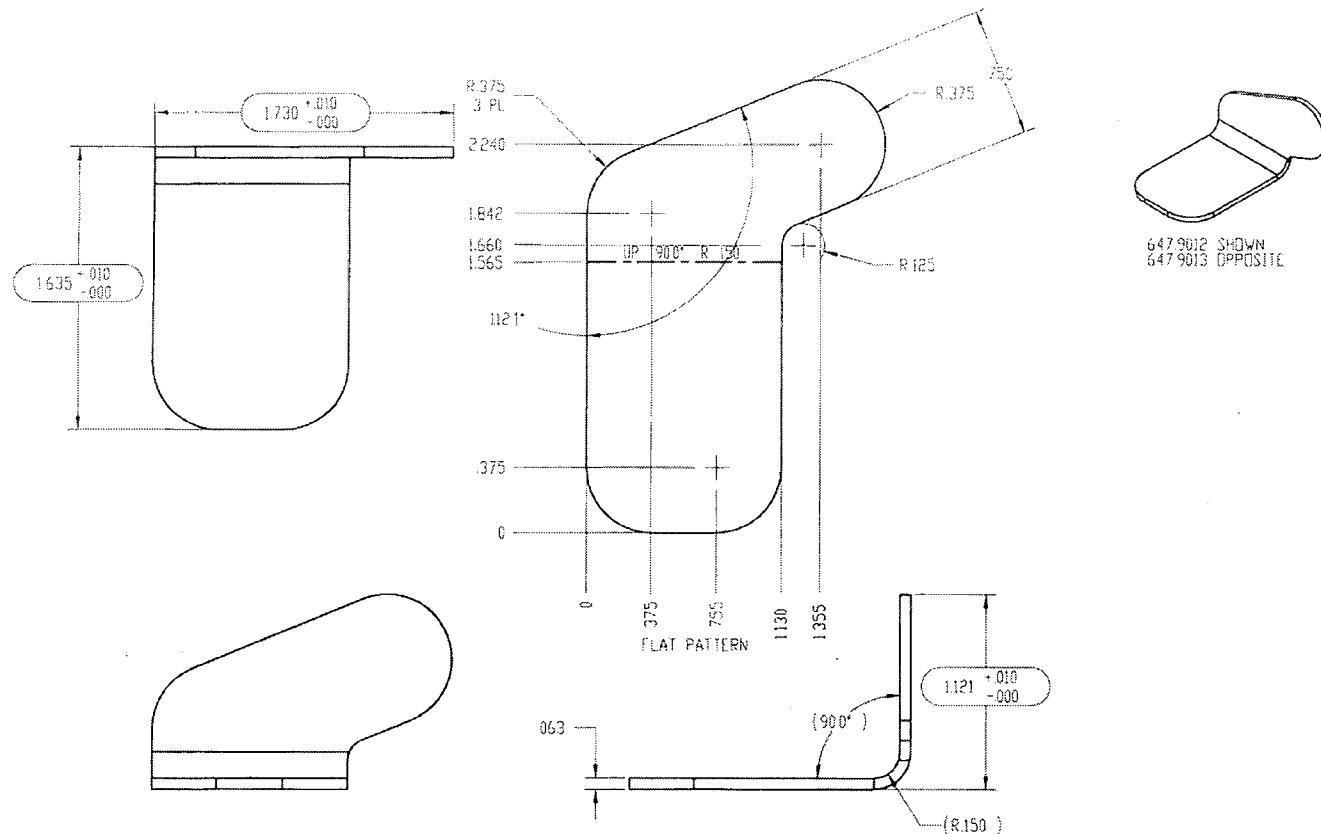
NOTES: UNLESS OTHERWISE SPECIFIED

- 1 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N
- 3. DEBURR AND BREAK ALL SHARP EDGES
- 4. IDENTIFY IAW MPP-120. LASER ETCH P/N AND REVISION 12PT. CENTURY GOTHIC.
- 5. ALL DIMENSIONS SHOWN PRIOR TO FINISH.
- 6 PART DIMENSIONS CONTROLLED BY CAD MODEL; FILE NAME: 647.9016 DOUBLER.SLDPRF -LAST MODIFIED 06-29-10
- 7. INSPECTION DIMENSIONS SHOWN WITH FINISH APPROX. 3-5 MIL MAX PER FACE.
- 8 MATERIAL: 304SS IAW AMS 5643
- 9 FINISH: PRIME IAW MIL-P-23377J, TYPE I, CLASS N

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 93167 MLS
12-11-16

F/N	R	647.9014		STRUT BRACKET	8	9
PART NUMBER		QTY	DESCRIPTION		MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:			<input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRUC <input type="checkbox"/> ICA <input checked="" type="checkbox"/> BOM	CHANGE CATEGORY <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR	DER REVIEW REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

93167

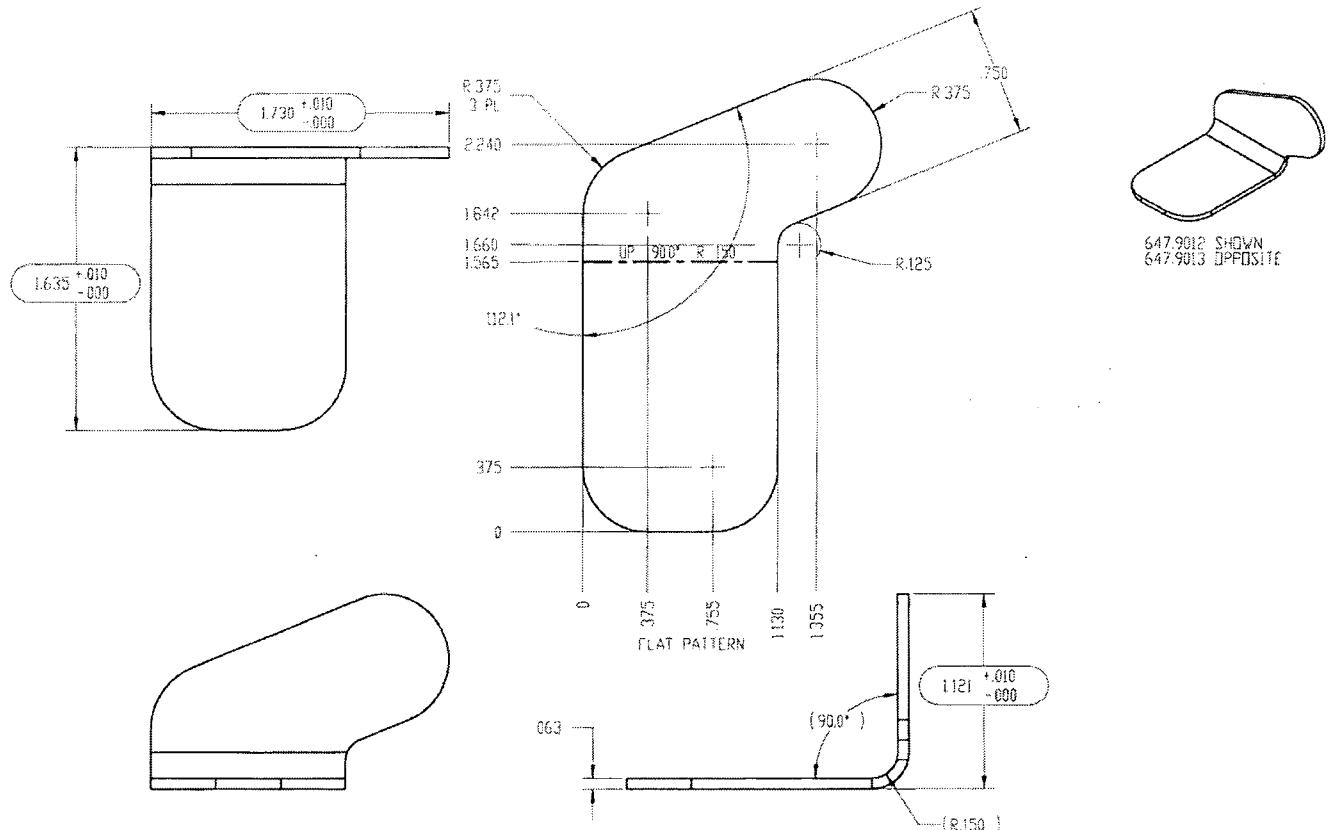
SHEET 3, IS:

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION

93167

APICAL INDUSTRIES, INC. TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE	ENGINEERING CHANGE NOTICE		NO. 03213	SHEET 1	OF 1	
	DWG NO. 647.9000	REV: N/C	PREPARED BY A. QUAN	EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC.		
	DWG TITLE: SHEETMETAL					
	APPROVED BY:	ENGR: <i>[Signature]</i>	MFG: <i>Darrell Baker</i>	QC: <i>Maurif Lyam</i>	EFF: CURRENT ORDER AND STOCK	
	REASON: REVISED 647.9013 DIMENSIONS					

SHEET 3, IS:



F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				CHANGE CATEGORY	DER REVIEW REQUIRED	
				<input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRUC <input type="checkbox"/> ICA <input type="checkbox"/> BOM <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

93167

NOTES: UNLESS OTHERWISE SPECIFIED

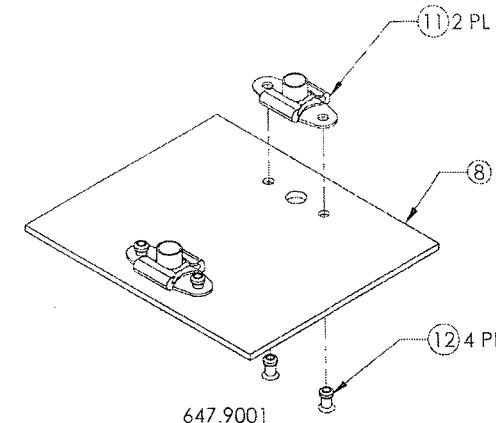
 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4

2) FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
PRETREAT PR-148 ADHESION PROMOTER, PRIME IAW MIL-P-23377J, TYPE I, CLASS N

3. DEBURR AND BREAK ALL SHARP EDGES
 4. IDENTIFY IAW MPP-120. LASER ETCH P/N AND REVISION 12PT. CENTURY GOTHIC.
 5. ALL DIMENSIONS SHOWN PRIOR TO FINISH.

6 PART DIMENSIONS CONTROLLED BY CAD MODEL; FILE NAME: 647.9016 DOUBLER.SLDPRT-LAST MODIFIED 06-29-10

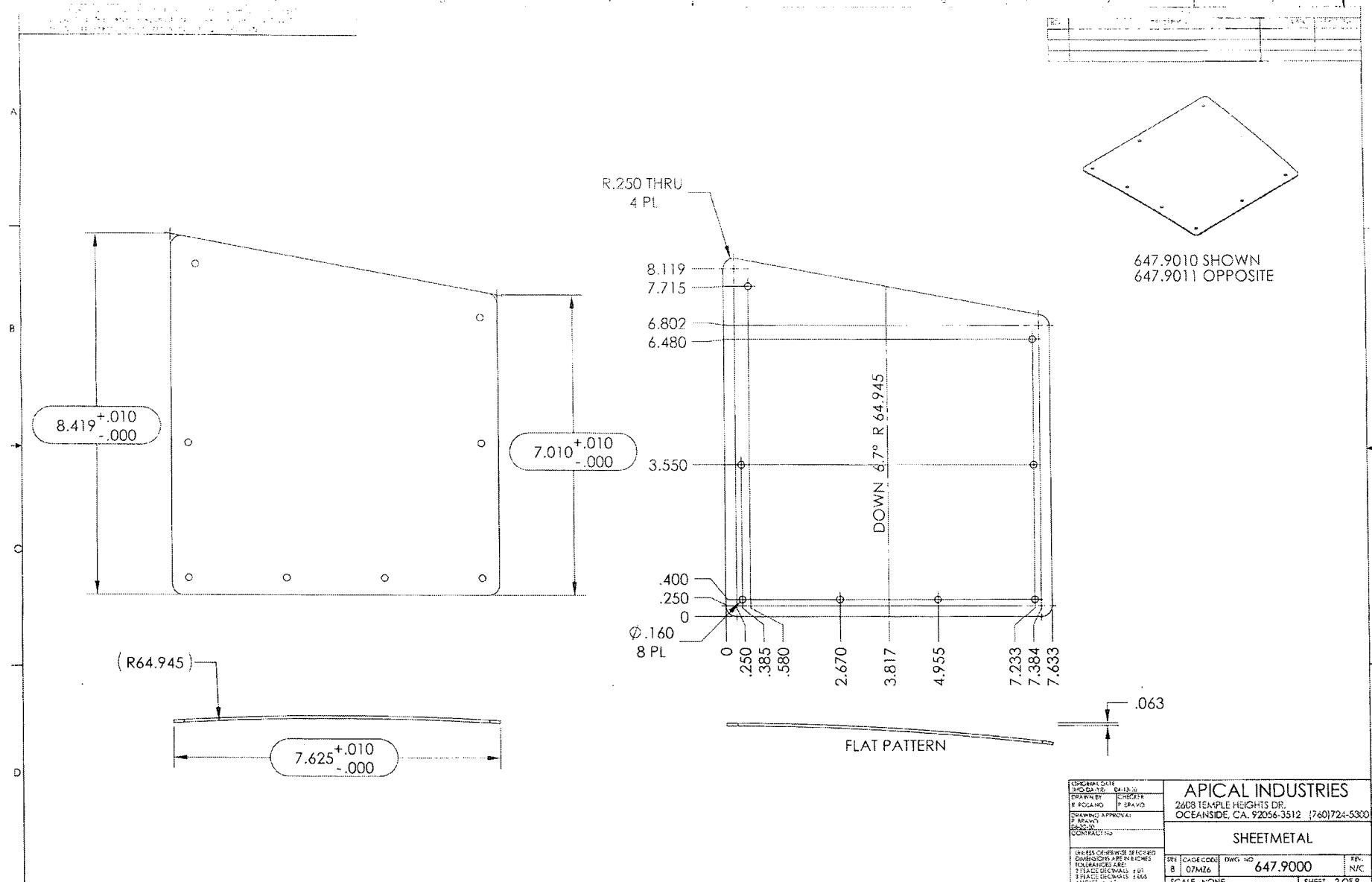
7. INSPECTION DIMENSIONS SHOWN WITH FINISH APPROX. 3-5 MIL MAX PER FACE.



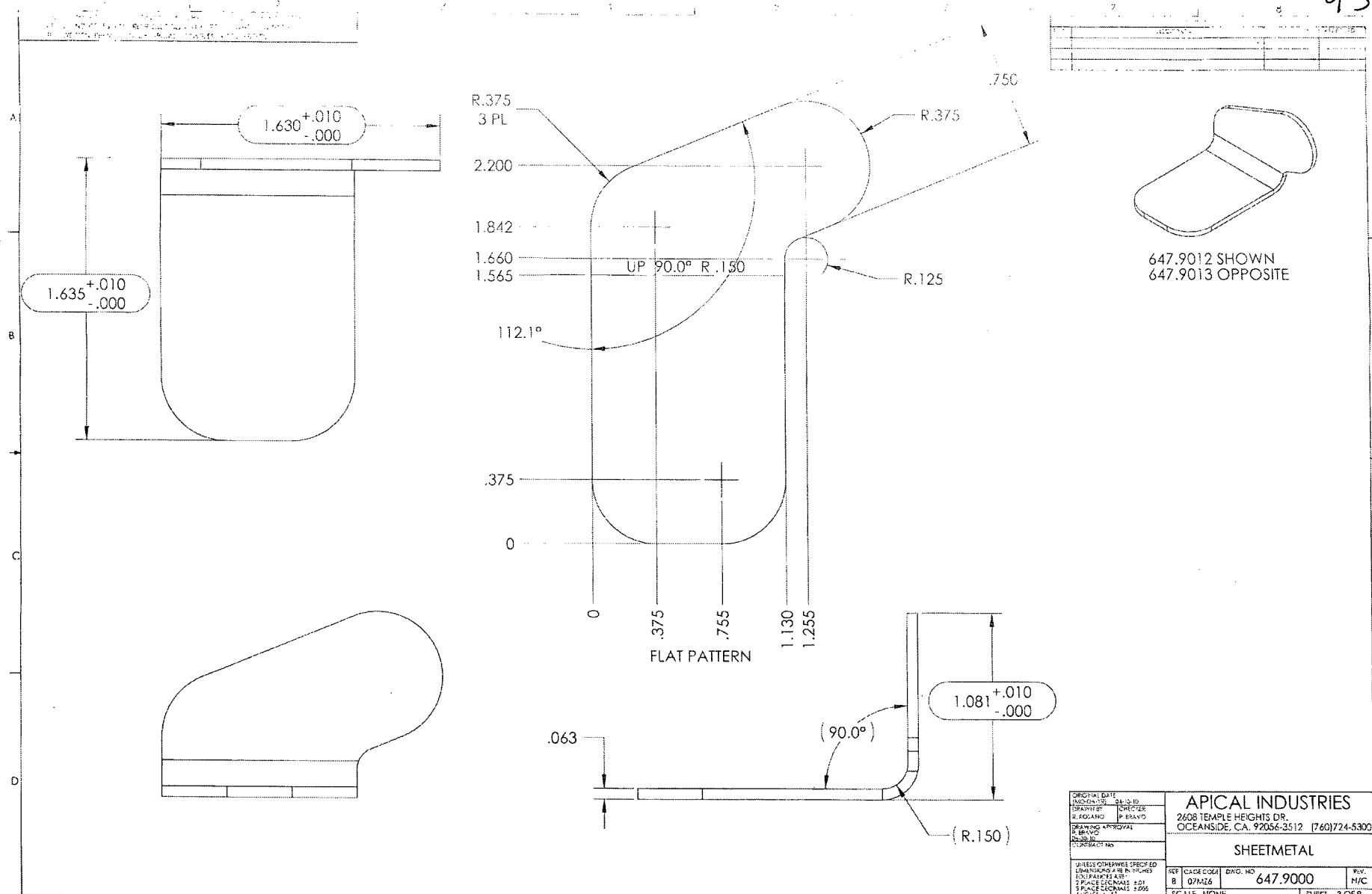
UNINCORPORATED ECN(s)

03213, 03246

93167

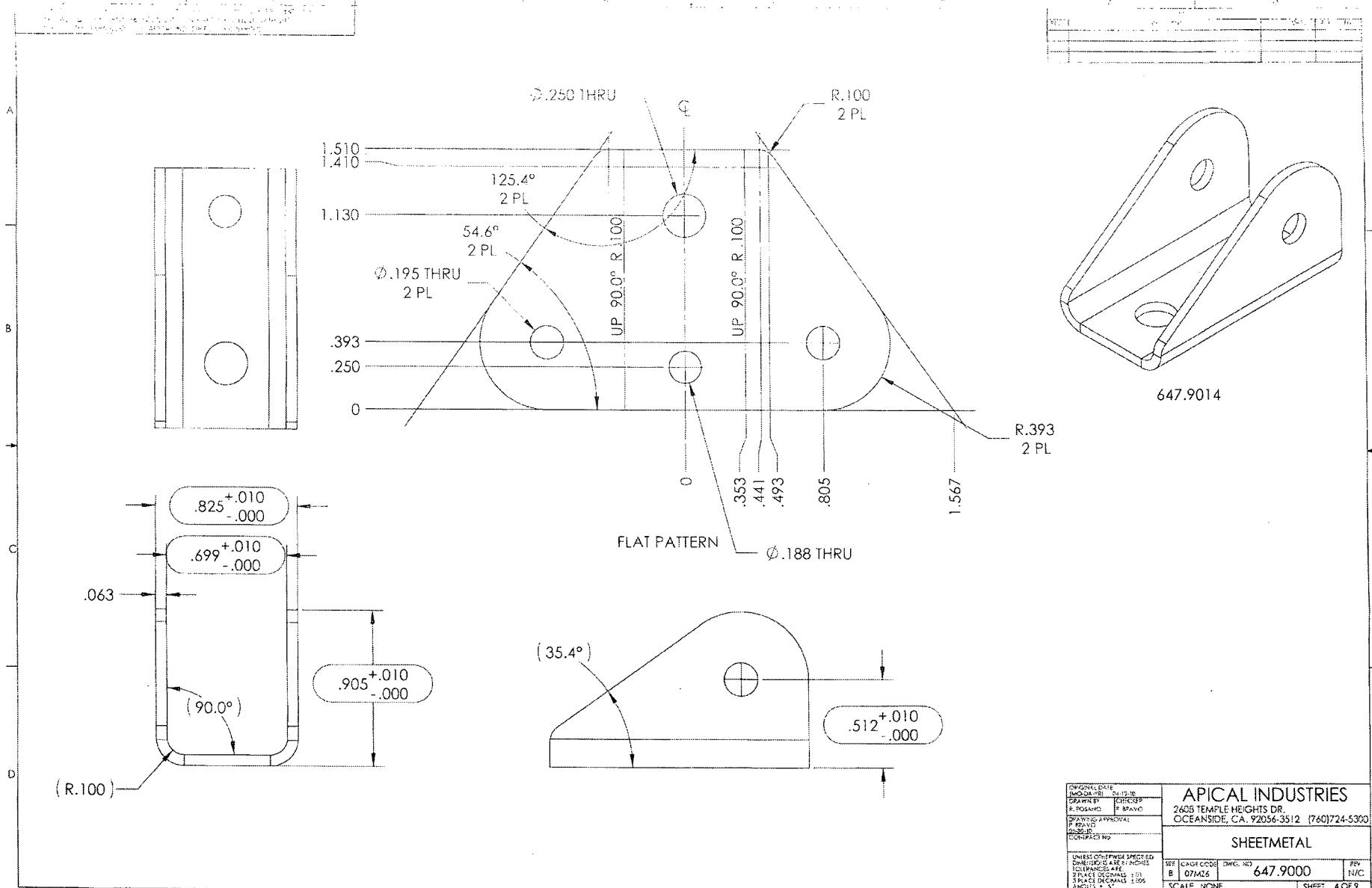


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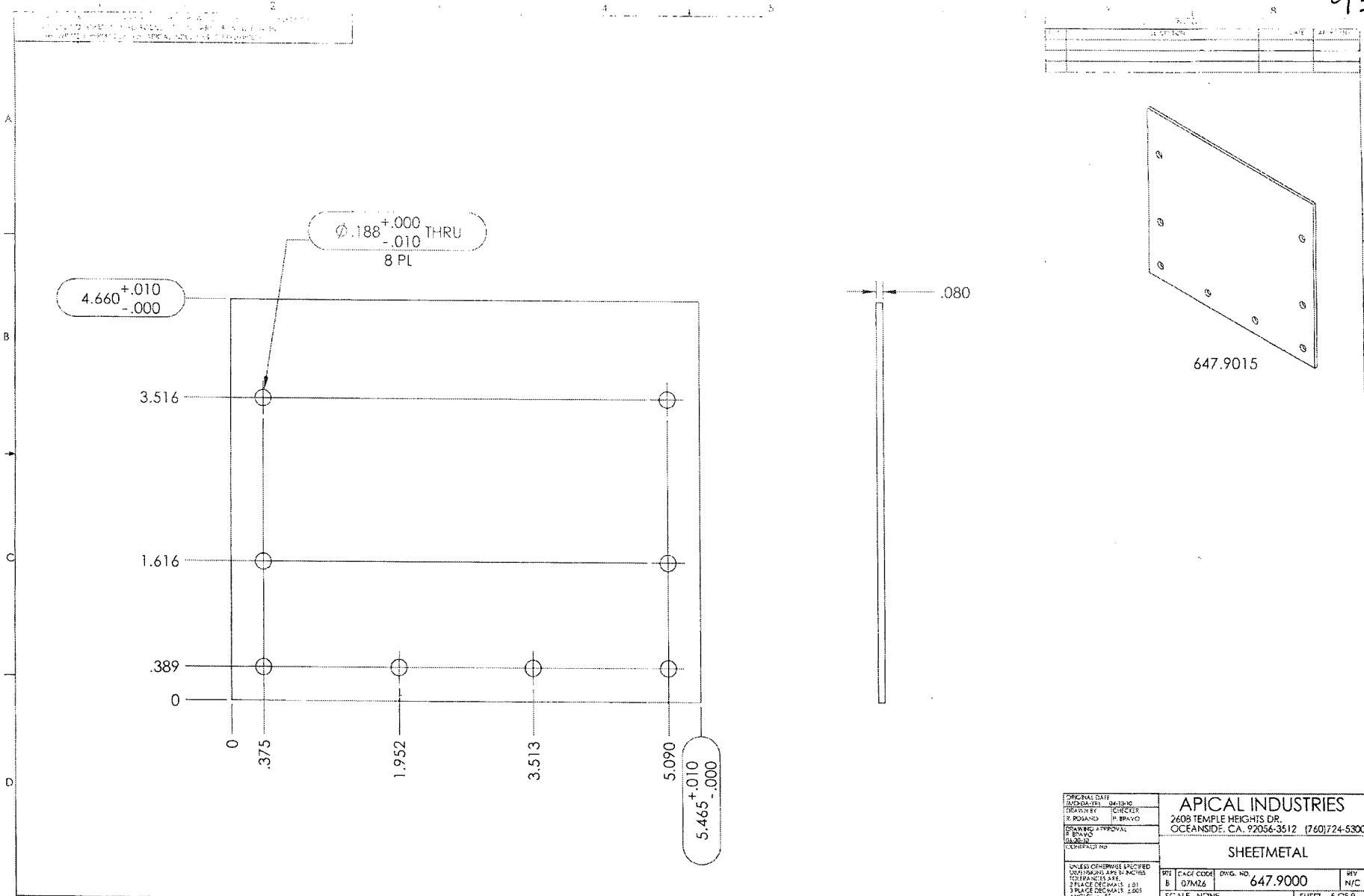


ORIGINAL DATE	REVISED DATE
DESIGNER	CHECKER
R. AGLANO	P. BRAVO
SHEETMETAL APPROVAL	
DATE APPROVED	
DRAWN BY	
APICAL INDUSTRIES	
2608 TEMPLE HEIGHTS DR.	
OCEANSIDE, CA. 92056-3512 (760)724-5300	
SHEETMETAL	
PRINTED ON 07/16/2016	
REF: CAD/CODE	REV. NO.
B 07M16	647.9000
SCALE: HONE	
SHEET 3 OF 9	

93167



ORIGINAL DATE REMOVED AS IS 04/12/06	APPROVAL DATE 04/12/06	APPROVING P. BRAVO	APICAL INDUSTRIES 2405 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760)724-5300
DRAWING APPROVAL P. BRAVO 04/12/06 CONTRACT NO.			SHEETMETAL
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE .010 UNLESS OTHERWISE SPECIFIED PLACE DECIMALS .000 ANGLES ± 5°	REF. CODE B-07M06	DWG. NO. 647.9000	REV. N/C
SCALE: NONE		SHEET: 4 OF 9	



ORIGINAL DATE	RE-DATE	DRAWING NO.	APICAL INDUSTRIES
RE-DATED BY	CHIEF CHECKER	REV.	2408 TEMPLE HEIGHTS DR.
2ND DRAFT BY	IN BRAVO	DATE	OCEANSIDE, CA. 92056-3512 (760)724-5300
DRAWING APPROVAL		BY	APICAL INDUSTRIES
DRAWN BY		DESIGNER	APICAL INDUSTRIES
CHECKED BY		INSPECTOR	APICAL INDUSTRIES
APPROVED BY		APPROVING	APICAL INDUSTRIES
COPPIED BY		COPYRIGHT	APICAL INDUSTRIES
COPPIED DATE		DATE	APICAL INDUSTRIES
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES. TOLERANCES ARE .005. ANGLES ARE IN DEGREES. 1 PLACE DECIMALS. 2 PLACES FOR 1/16 INCHES. ANGLES $\pm 3^\circ$.			
12/1	CHECK CODE	DRAW. NO.	647.9000
6	07M26	REV.	N/C
SCALE NONE		SHEET	5 OF 9

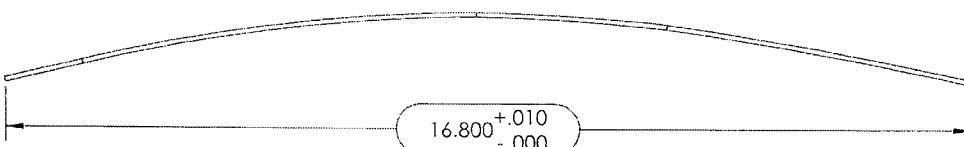
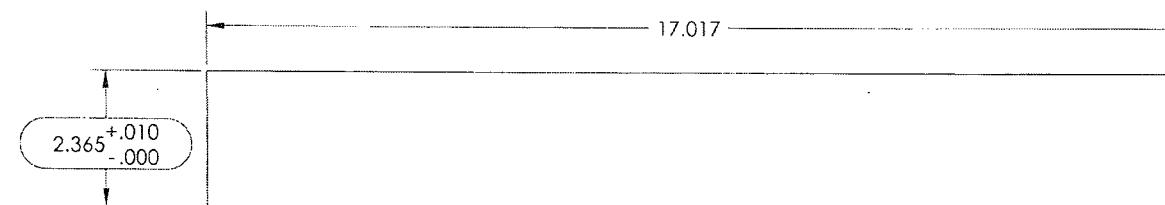
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APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300



647.9016

6

1.247^{+.010}
-.000

FLAT PATTERN

.080

DATE ISSUED	01-15-16
DRAWN BY	G. SCHWARTZ
REVIEWED BY	R. RODANO
APPROVAL	P. BRAVO
DESIGNER	R. RODANO
CHIEF DESIGNER	
APICAL INDUSTRIES	2608 TEMPLE HEIGHTS DR.
	OCEANSIDE, CA. 92056-3512 (760)724-5300
SHEETMETAL	
UNLESS OTHERWISE SPECIFIED	
DIMENSIONS ARE IN INCHES	
1 PLACE DECIMALS ARE	
2 PLACE DECIMALS ARE	
3 PLACE DECIMALS ARE	
SCALE NONE	REV N/C
DATE 07M16	DRAWING NO. 647.9000
	1 SHEET 6 OF 9

93167

1	2
3	4

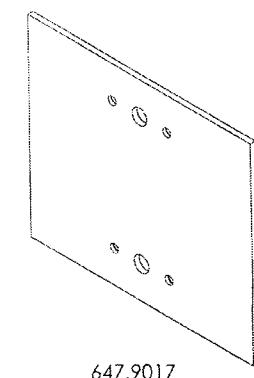
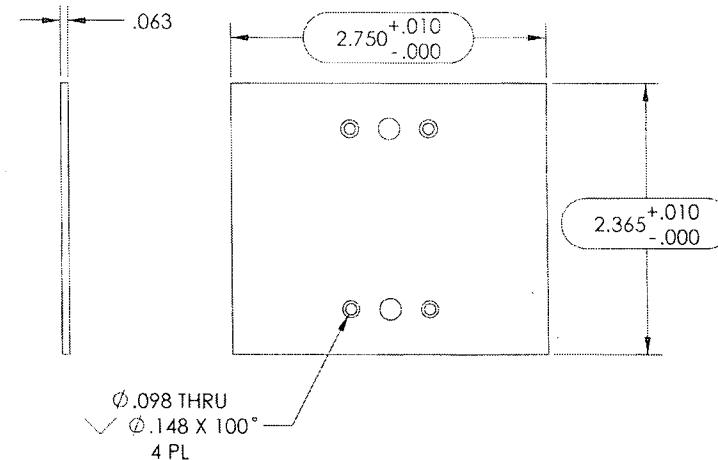
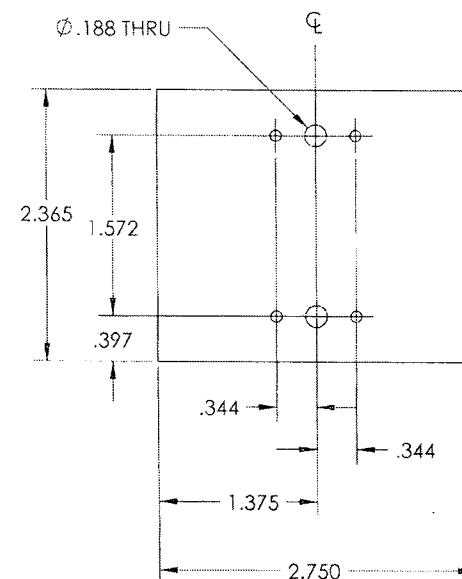
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7	8

A

B

C

D

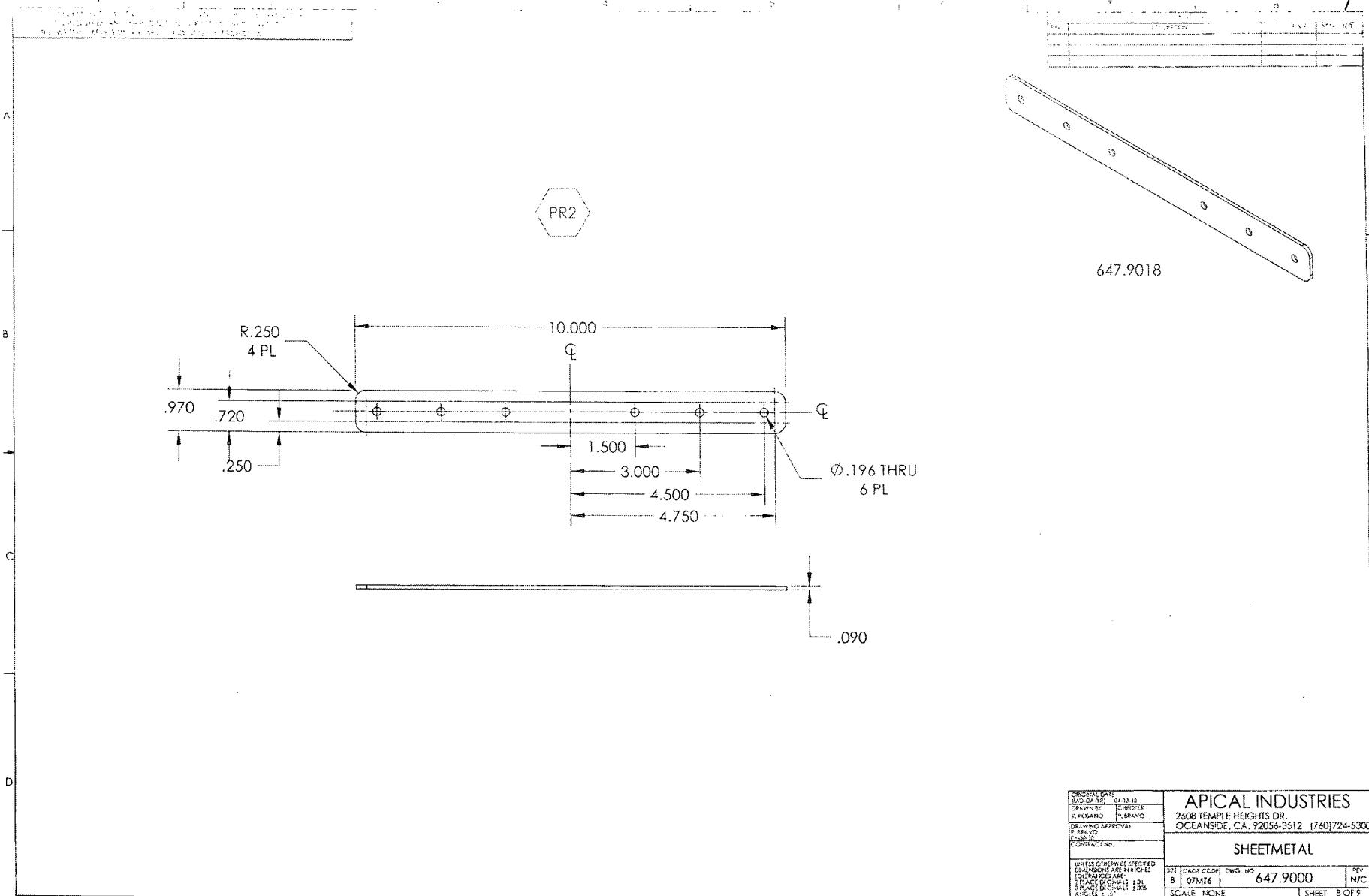


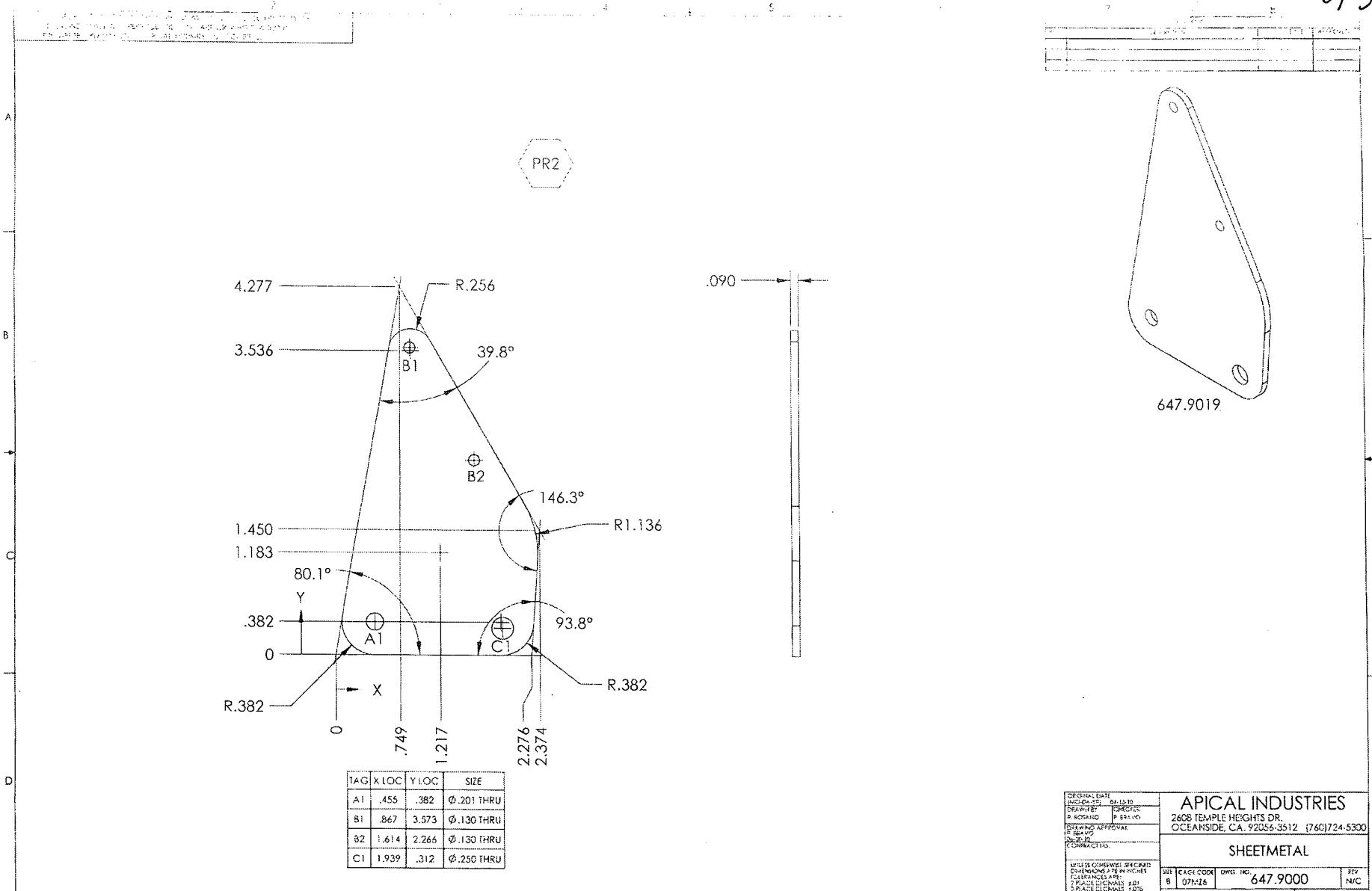
ORIGINAL DATE 2023-03-19	DATE ISSUED 2023-03-19
DRAWN BY P. RONALDO	CHECKED P. BRAVO
SUPERVISOR APPROVAL S. BRAVO	SP. BRAVO
2023-03-19	2023-03-19
CD-100-A-C1190	

APICAL INDUSTRIES	
2608 TEMPLE HEIGHTS DR.	OCEANSIDE, CA 92056-3512 (760)724-5300
SHEETMETAL	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES 3 PLACE DECIMALS \$0.001 4 PLACE DECIMALS \$0.0001 ANGLES \$±1°	REV N/C
CUT CAGE CODE: 0000 100 B 07M26	647.9000
SCALE: NONE	SHEET: 7 OF 9

93167





GENERAL DATA
INCHES-CM
DRAWN BY: D. BRUNER
P. ROTATED BY: D. BRAVO
REVIEWED AND APPROVED
BY: D. BRAVO
CONTRACTS:
2013-01

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92054-3512 (760)724-5300

SHEETMETAL

DATE: 04-15-10	REV: N/C
SPC CODE: 647.9000	SPC NO: 07M16
SCALE: NONE	SHEET: 9 OF 9



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada
Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 62107

Date: 12-Dec-12

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via
Quantity	Description	
1 lot	Part: ASST 8 PCS 647.1610 5 PCS 647.1612 2 PCS 647.1713 6 PCS 647.1811 1 PC 647.1816 1 PC 647.1817 8 PCS 647.1818 11 PCS 646.3210 20 PCS 646.3313 10 PCS 646.3717 20 PCS 646.3717 16 PCS 647.4610 10 PCS 649.4811 10 PCS 649.4812 24 PCS 649.4814 30 PCS 649.4815 6 PCS 647.7913 3 PCS 647.7919 10 PCS 647.9010 10 PCS 647.9011 15 PCS 647.9012 40 PCS 647.9013 38 60 PCS 646.9710 HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 Job: 20120768	Rev: Line:
	Certificate of Conformance A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.	
	ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY	
	DATE: <u>12/12/12</u>	



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada
Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 62107

Date: 12-Dec-12

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

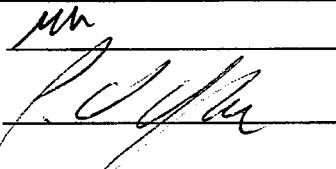
DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms	Ship Via
Quantity	Description
	CERTIFIED SIGNATURE :  RECEIVER SIGNATURE : 